



# EARTHQUAKE

An Earthquake is a sudden release of energy from the earth's crust that creates seismic waves. Stress is created in the earth's crust from thermal variations, tectonic changes, and other forms of pressure. Weaknesses in the earth crust yield when the stresses exceed the friction along these crustal weaknesses, and an earthquake happens. At the earth's surface, earthquakes may manifest themselves by a shaking or displacement of the ground.



## HAS IT HAPPENED LOCALLY?

Historically, there have been two recorded Earthquake events with an epicenter in Howard County. Additionally, there was a cluster of small earthquakes in 1993 in Allview Estates in Columbia, MD. In 2017, Howard County experienced two earthquakes. The first was an earthquake of 1.52 magnitude in Glenelg, Maryland. The second was an earthquake of 1.5 magnitude in Roxbury, Maryland. Including the recent earthquake data provided by the MGS, there has been 12 earthquake events in Howard County within the reviewed time period of 1990-2019.

## WHAT IS THE ONGOING RISK?

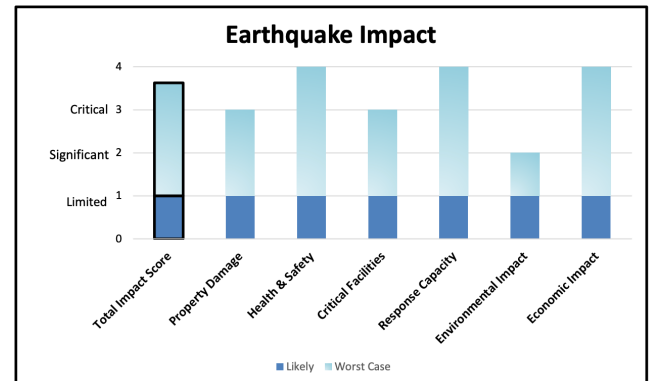
There is an expected 1-10% Chance of Annual Occurrence of an Earthquake in Howard County. In the most likely Earthquake scenario, the Total Impact is considered Limited. In the worst-case scenario, the Total Impact is considered Critical-Catastrophic.

## DID YOU KNOW?

- Data from the Maryland Geological Survey (MGS), indicates there have been 70 Earthquake events with epicenters in Maryland between 1758-2017.
- In the Atlantic Coastal Plain, it is now thought that earthquakes may be associated with nearly vertical faults that formed during the opening of the present Atlantic Ocean.

## FOR MORE INFORMATION:

- [Howard County Hazard Identification and Risk Assessment](#)
- [Maryland Geological Survey](#)
- [Ready.gov](#)



Earthquake Risk Profile				
LIKELIHOOD	Risk Assessment Category	Likely Hazard Scenario	Worst-Case Hazard Scenario	Weight
CONSEQUENCE	Likelihood	2 Infrequent		50%
	Impact	1 Limited	3.6 Critical-Catastrophic	40%
	Warning Time	4 Short	4 Short	5%
	Duration	1 Short	1 Short	5%
TOTAL RISK SCORE		1.6	2.6	

